HP Vectra Familiarization Guide

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Hewlett-Packard France
Grenoble Personal Computer Division
Technical Marketing
38053 Grenoble Cedex 9
France
1995 Hewlett-Packard Company

1 Product Overview and Features

Vectra Products Comparison

After reading this chapter, you will be able to describe the features specific to this PC.

The following table compares the new HP Vectra XM 5/xx Series 3 PC with the HP Vectra XM2 PC (integrated LAN models only) and the HP Vectra VL 5/xx Series 3 PC.

HP Vectra XM2 (D32xxA series- integrated LAN models only)	HP Vectra XM 5/xx Series 3 (D348xA and D356xA series)	HP Vectra VL 5/xx Series 3 (D339xA and D340xA series)
Microprocessor		
4/50i: i486 50 Mhz 4/66i: i486 66 Mhz 4/100i: i486 100 MHz	5/75: PentiumTM 75 Mhz 5/90: PentiumTM 90 Mhz 5/120: PentiumTM 120 MHz	5/75: PentiumTM 75 Mhz 5/90: PentiumTM 90 Mhz 5/100: PentiumTM 100 Mhz 5/120: PentiumTM 120 MHz1
Math coprocessor		
On the microprocessor		
Main Memory		
32-bit (70 ns)	32-bit (70 ns)	32-bit (70 ns)
Standard/Maximum Memory		
8 MB / 96 MB	8 MB (pair of 4 MB modules) or 16 MB (pair of 8 MB modules) / 192 MB	8 MB (pair of 4 MB modules) or 16 MB (a pair of 8 MB modules) /192 MB
Memory Sockets		
3	6	6
Cache memory		
8 KB for code, plus 8 KB for data (both caches on the microprocessor)	8 KB for code, plus 8 KB for data (both caches on the microprocessor)	8 KB for code, plus 8 KB for data (both caches on the microprocessor)
2nd level cache		
256 KB (Integrated on system board)	256 KB (Integrated on system board)	256 KB (Integrated on system board)
Video Controller		
Integrated Ultra VGA on PCI bus	Integrated 64-bit Ultra VGA on PCI bus (Cirrus Logic 5434)	Integrated 64-bit Ultra VGA on PCI bus (Cirrus Logic 5434)
Video Memory Upgrade Socket		
1 MB (expandable to 2 MB) One (use D3241A)	1 MB (expandable to 2 MB) One (use D3404A)	1 MB (expandable to 2 MB) One (use D3404A)
Disk Controller		
Fast IDE controller	Fast IDE controller on PCI	Fast IDE controller on PCI

	local bus	local bus
Mass storage		
One front access 3.5-inch shelf One front access 5.25-inch shelf Two internal 3.5-inch shelves for hard disks	One front access 3.5-inch shelf One front access 5.25-inch shelf One front access 5.25-inch/3.5-inch (1-inch high) shelf One internal 3.5-inch shelf	One front access 3.5-inch shelf One front access 5.25-inch shelf Two internal 3.5-inch shelves for hard disks
Hard Disks		
Fast IDE 210 MB (14 ms) Fast IDE 270 MB (12 ms) Fast IDE 540 MB (12 ms)	Fast IDE 420 MB (10 ms) Fast IDE 840 MB (10 ms)	Fast IDE 420 MB (10 ms) Fast IDE 840 MB (10 ms)
Integrated ports		
1 parallel port (bi-directional) 2 serial ports, 1 infrared serial link 1 LAN port with RJ-45 UTP connector VGA connector Keyboard connector Mouse connector	1 parallel port (bi-directional) 2 serial ports 1 LAN port with RJ-45 UTP connector VGA connector Keyboard connector Mouse connector	1 parallel port (bi-directional) 2 serial ports VGA connector Keyboard connector Mouse connector
Accessory slots		
One 16-bit ISA (full-length) One 16-bit ISA (half-length) One PCI/ISA Combination (full-length) One PCI (half-length)		
Network Interface		
Yes (on XM2i models only)	Yes (all models)	No

Power Supply

100 W (full range 90-264 VAC)

Security

Power-on Password, mechanical cover lock, disk, and port disabling.

Passwords

User Password and System Administrator Password

Preinstalled Software

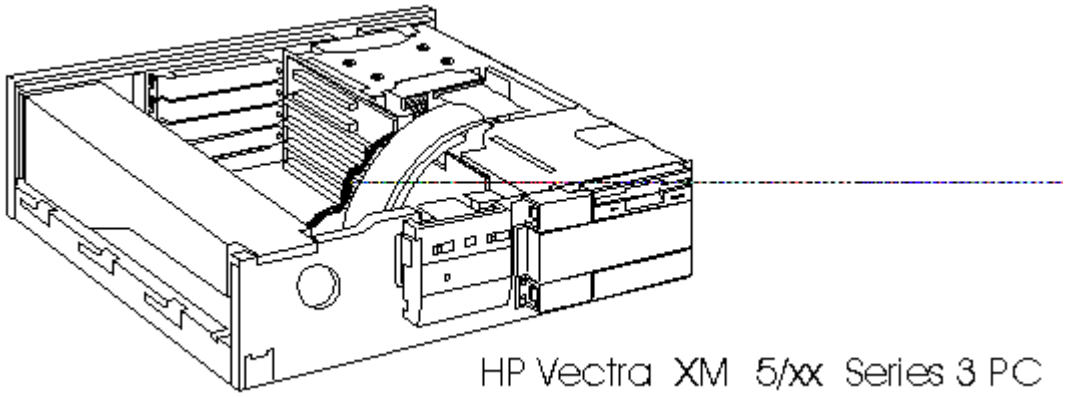
MS-DOS 6.22, Windows for Workgroups 3.11, Dashboard, HP User Tool, Drivers

BIOS ROM

HP BIOS, Flash EEPROM

System ROM localization		
Localized	Localized	English only

[1]Future models.



Product Features

NOTE Features specific to the XM 5/xx series 3 PC are highlighted in bold.

Overview

The HP Vectra XM 5/xx series 3 is a PENTIUM processor, ISA/PCI-based PC. The system consists of a system board and backplane.

- The XM 5/xx series 3 backplane has two ISA slots, one PCI slot, and one combination ISA/PCI slot for accessory boards.

New Features

- New mid-profile box with three front-access drive shelves
- New colors: quartz for the box and gray for the control panel
- Full set of pre-installed and pre-configured network drivers

The main features of the system board are:

- A 64-bit host bus for PENTIUM processor and main memory (DRAM).
- A 32-bit Peripheral Component Interconnection (PCI) local bus for accessing the processor, LAN Controller, video controller, and controller components.
- An industry-standard architecture (ISA) bus for ISA-compatible controllers.
- A security system that provides protection against u nauthorized use of the PC.
- A flash BIOS updating facility.

Models

The following models will be available at product launch:

Platform	Model	Product Number	PCI LAN Adapter	256 KB Cache	System RAM	Video RAM
XM 5/75	1	D3480A	YES	Async.	8 MB	1 MB
	420	D3481A				
XM 5/90	1	D3483A	YES	Async.	8 MB	1 MB
	420	D3484A				
	840	D3485A				
XM 5/120	1	D3560A	YES	Async.	8 MB	1 MB
	840	D3562A				

Microprocessor

The Pentium microprocessors used in the HP Vectra XM 5/xx series 3 use internal clock multiplication, similar to that used by the 486 DX2 processor. The microprocessor's internal clock is a multiple of the system clock. The Pentium 75 and 90 MHz processor multiply the 50 and 60 MHz system clock by a factor of 1.5. The Pentium 120 MHz processor doubles the 60 MHz system clock.

These new Pentium processors are powered by a power source of 3.3 V. The previous generation of Pentium processors, Pentium 60 MHz and 66 MHz, used a 5 V power source. The two generations of processors are **not** pin compatible.

Other current and future Intel processors based upon the 66 MHz system clock include the Pentium 100 MHz and the Pentium 133 MHz. These processors are not available on the HP Vectra XM 5/xx series 3 platform at the time of printing.

Cache Memory

The microprocessor has two 8 KB first-level caches: one for the instruction codes and the other for data.

The HP Vectra XM 5/xx series 3 PC has 256 KB of second-level cache memory, which is soldered onto the system board.

DRAM Main Memory Modules

The HP Vectra XM 5/xx series 3 PC has six sockets on the system board. 8 MB (two 4 MB SIMMs) or 16 MB (two 8 MB SIMMs) of memory is supplied as standard, expandable to 192 MB.

Each pair of sockets forms a bank. When two memory modules are installed within the same bank, it is recommended that they have the same size.

The PCs use 70 ns, 32-bit wide memory modules. The memory upgrades available are:

- 4 MB, 32-bit, 70 ns (D2690A) or 4 MB, 36-bit, 70 ns (D2974A)
- 8 MB, 32-bit, 70 ns (D2691A) or 8 MB, 36-bit, 70 ns (D2975A)
- 16 MB, 36-bit, 70 ns (D2297A)
- 32 MB, 36-bit, 70 ns (D2298A)

System ROM

The PC has a system ROM that uses flash EEPROM technology. The flash ROM can be updated with the latest firmware using the HPInit program (HPINIT.EXE) supplied with the firmware upgrade.

System BIOS

The system BIOS is identified by the version number **GM.05.xx.**

POST

When the PC is started, the Power-On Self Test (POST) screen is displayed. If the POST detects an error, the error message can be read and the SETUP program can be run to check the configuration.

SETUP Program

The HP Vectra XM 5/xx series 3 PC has an integrated SETUP program (like the HP Vectra XM2 and XP PC series.

SETUP is started by pressing F2 when the message <Setup=F2> appears.

Video Controller

The HP Vectra XM 5/xx series 3 PC has a 64-bit PCI video controller (Cirrus Logic 5434). The controller has 1 MB DRAM video memory as standard, upgradeable to 2 MB DRAM using the D3404A video memory upgrade kit (one module of 1 MB--the same module is used in the VL 5/xx series 3 PC).

Resolution	Video Memory Required for these Colors and Refresh Rates			
	16 Colors	256 Colors	64 K Colors Hi-Color	16.7 M Colors True-Color
640 x 480	1 MB 60/72/75 Hz			1 MB 60 Hz 2 MB 60/72/ 75 Hz
800 x 600	1 MB 56/60/72/75 Hz		1 MB 56/ 60 Hz 2 MB 56/60/72/ 75 Hz	2 MB 56/60 Hz
1024 x 768	1 MB 87i[1] 60/70/75 Hz		2 MB 87i/60/70/75 Hz	Not Available
1280 x 1024	1 MB 87i Hz	2 MB 87i/60/70/ 75 Hz	Not Available	

[1] i: interlaced

Preinstalled Software

Models with hard drives are supplied with the following preinstalled software and drivers:

- MS-DOS 6.22
- MS-Windows for Workgroups 3.11
- HP User Tools
- Dashboard
- Mouse Control Center
- HP Video drivers
- **LAN drivers (preinstalled and preconfigured, see list below)**
- IDE Disk drivers (for 32-bit access)
- ISA Plug and Play configuration utility (ICU) and driver
- Advanced Power Management
- Desktop Management Interface

The first time the PC is powered on, a software initialization program runs to allow the user to set up the preinstalled software for the network connection, the display type, and the printer.

On models without a hard drive, the utilities and drivers are supplied on diskettes.

LAN Drivers

The HP Vectra XM 5/xx series 3 PC is supplied with a wide range of **preloaded and preconfigured (Novell and Microsoft client only) drivers.**

- Windows for Workgroups 3.1
- Windows for Workgroups 3.11
  PCNET driver can be loaded in dual mode NDIS2/NDIS3)
- Windows NT
- NDIS for DOS
- NDIS for OS/2
- NDIS 2.01 for Banyan Client
- SCO LLI 3.2 drivers
- NetWare Server 3.1x and 4.0x
- NetWare for OS/2
- NetWare for DOS
- Lan Manager for OS/2
- Lan Manager for DOS
- Remote Boot for NT AS 3.5 Server
- Remote Boot for Novell NetWare 3.1x and 4.0x

Online Guides

The HP Vectra PC has these online guides accessible from the Hputils group in the Windows Program Manager:

- **Discover Your HP Vectra**
- **Network Administrator Guide**

Disk Controllers

The integrated flexible disk controller supports two flexible disk drives. The integrated Enhanced IDE hard disk controller is on the PCI bus and dedicated for hard disk drives. This is the gray connector on the system board. The cable has tow connectors, allowing two Fast IDE hard disks to be connected (a CD-ROM can be connected to this cable, but the 32-bit disk access must be disabled).

The second IDE controller is on the ISA bus and is dedicated to the CD-ROM drives. This is the red connector on the system board. The cable has one connector allowing one CD-ROM to be connected (this is the recommended configuration for a CD-ROM).

Front Accessible Mass Storage Shelves

The PC has **three front accessible mass storage shelves:**

- slim top shelf (1-inch high) for 3.5-inch or 5.25-inch devices
- half-height middle shelf for 5.25-inch devices
- **slim bottom shelf (1-inch high) for 3.5-inch or 5.25-inch devices.**

The additional 1-inch high bottom shelf can be used to install any of the new 1-inch-high front-access devices. Tape drives and 5.25-inch flexible disk drives are now becoming available in the industry with the 1-inch high form factor.

The following mounting rails can be ordered for front access drives:

- D2880A 5.25-inch disk drive mounting rails (five pairs of rails)
- **D3566A 3.5-inch disk drive mounting rails (five pairs of rails).**

Internal Mass Storage Shelf

The HP Vectra XM 5/xx series 3 PC has one dedicated internal shelf for 3.5-inch slim (1-inch) hard disks. A second hard disk can be installed in the bottom shelf, if it is not used for a tape drive or flexible disk drive.

Supported Drives

- 3.5-inch, 1.44 MB flexible disk drive (D2035B)
- 5.25-inch, 1.2 MB flexible disk drive (D2881B)
- 3.5-inch, 540 MB IDE hard disk drive (D2389BA)
- 3.5-inch, 1 GB SCSI hard disk drive (D2076B)
- 340 MB half-height internal tape drive QIC-80 (C4328CA)
- 800 MB half-height internal tape drive QIC-80 (C4329CA)
- 1.36 GB half-height internal tape drive QIC-3020 (C4330CA)
- double-speed (2.x) IDECD-ROM drive (D2889A)

Control Power

The PC has the same control panel as the HP Vectra XM2 PC series and has the same features:

- a power on/off button with integrated on/error status ligh t
- a press-and-hold RESET button
- a keyboard lock button with integral status light
- a hard disk activity light (for IDE and **SCSI** drives)

Security Features

The PC has the following security features:

- power-on prompt, with user password
- communications port protection (ports can be disabled in SETUP)
- disk drive protection (disks can be disabled in SETUP)
- system configuration protection, using switches
- cover lock and security bracket

Communications Ports

The PC has the following external communications ports:

- One LAN port with RJ-45 UTP (Un-Twisted Pair) connector
  (the D2746A Coaxial Adapter accessory is available for users requiring a BNC coax connector)
- One 25-pin parallel port (ECP/EPP bi-directional Centronics supporting IEEE 1284)
- Two 9-pin serial ports (16550-compatible)

Supported Operating Systems

- MS-DOS version 6.22 and above
- Microsoft Windows™ 95
- Microsoft Windows for Workgroups 3.11
- Microsoft Windows NT 3.1
- OS/2 version 2.11 and 3.0
- UNIX/386 System V from SCO version 3.2 V4.1

Certified Network Operating Systems

- Novell 3.12/4.10 Server
- Novell 3.12/4.10 Workstation
- UnixWare App-Server version 2.0
- DEC PathWorks version 5.1 (on HP Vectra XM 5/90 only)
- Banyan Vines version 6.0 (on HP Vectra XM 5/90 only).

Documentation

Description	Part Number
HP Vectra XM 5/xx series 3 PC User's Guide	D3489A kit [1]
HP Vectra PC Service Handbook	5963-6103 (8th Edition)
HP Vectra Accessory Service Handbook	5963-6104 (4th Edition
HP Vectra XM 5/xx series 3 PC Technical Reference Manual: Hardware and BIOS	on-line edition only[2]
HP Vectra XM 5/xx series 3 PC Familiarization Guide	D348X + 49A-9001

[1] Specify Language Option when ordering this kit.

[2] This printable file can be downloaded from the HP BBS.

2 PC Hardware Structure

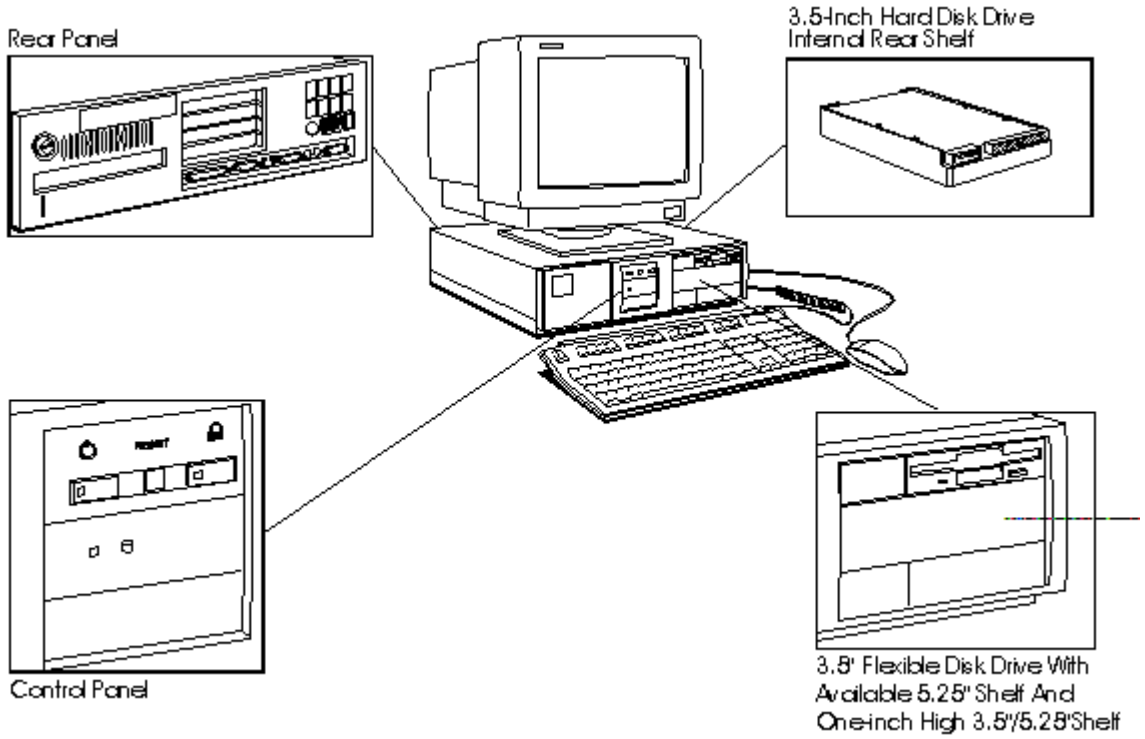
Packaging

After reading this chapter, you will be familiar with the PC's package and hardware assembly.

The HP Vectra XM 5/xx series 3 PC has a new mid-profile package.

The main external features are:

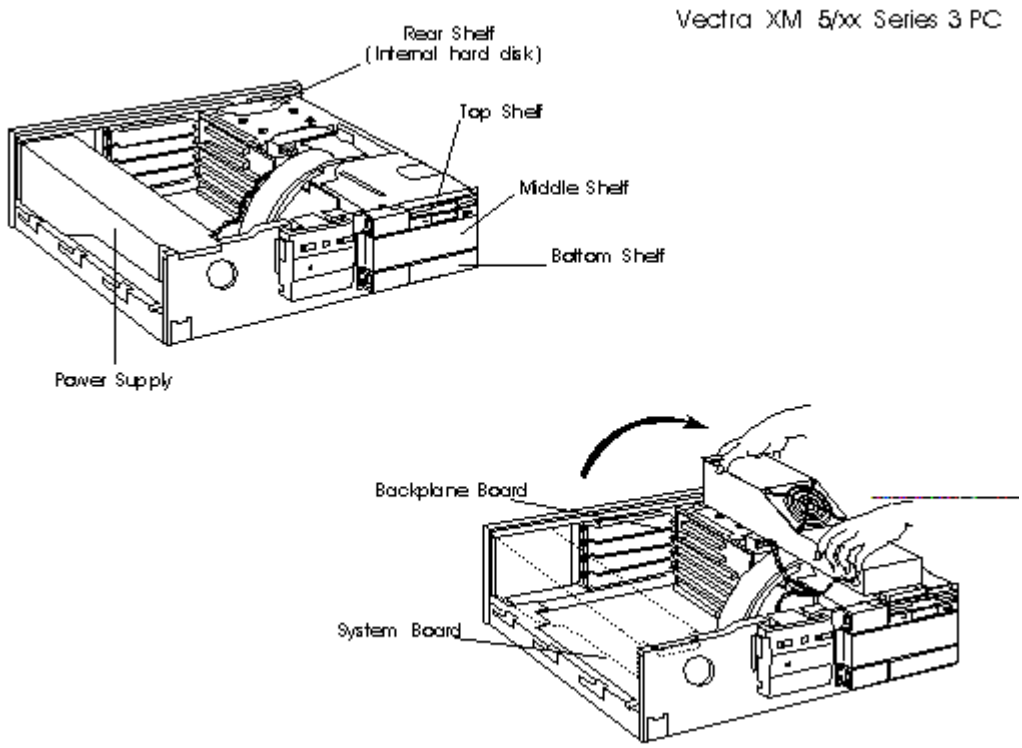
- three front-accessible drive shelves
- four accessory board slots for accessories (for example, an audio board)
- connectors for I/O devices on the rear panel
- three front-access shelves for 3.5-inch or 5.25-inch devices
- one internal shelf for 3.5-inch devices
- control panel and name plate.



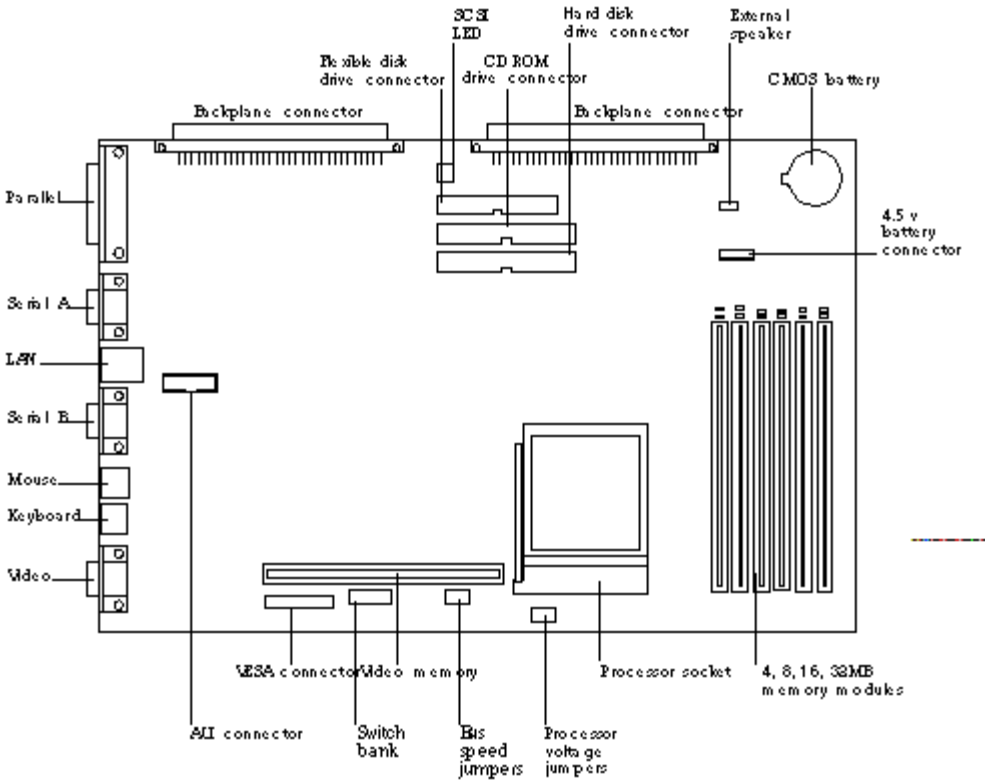
Internal Component Location

The location of the main internal components is shown below.

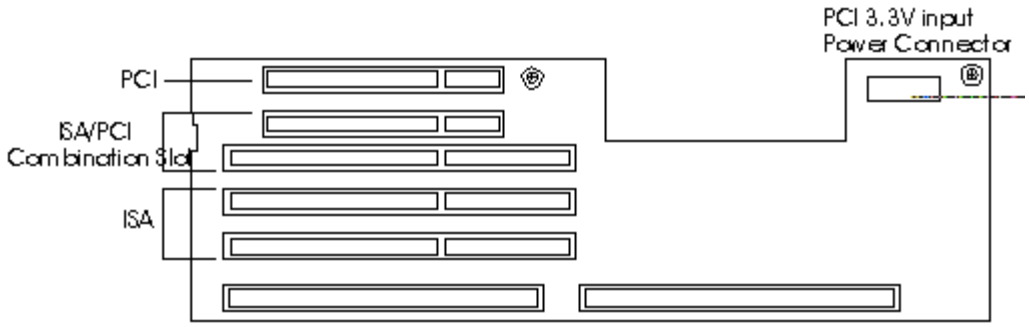
WARNING Care must be taken to ensure that all connectors are unplugged before removing the system board from the PC.



XM 5/xx Series 3 PC System Board



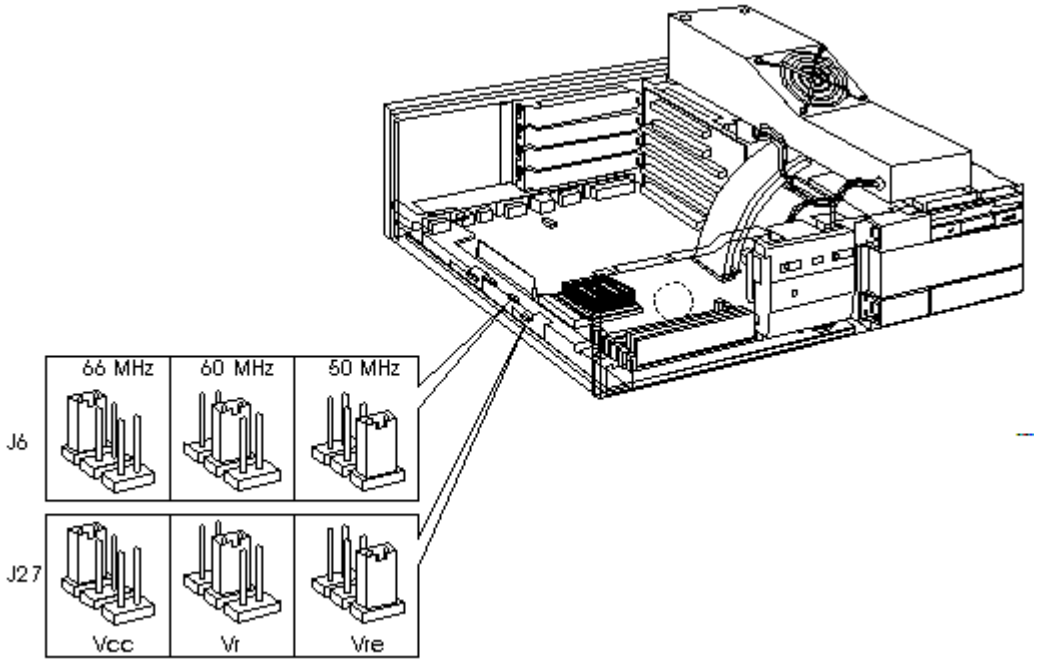
XM 5/xx Series 3 PC Backplane



System Board Jumpers

Replacing the System Board

When replacing the system board, the bus speed jumper and processor volt age jumper must be configured to correspond with the installed processor.



Jumper J6 is not available on most systems

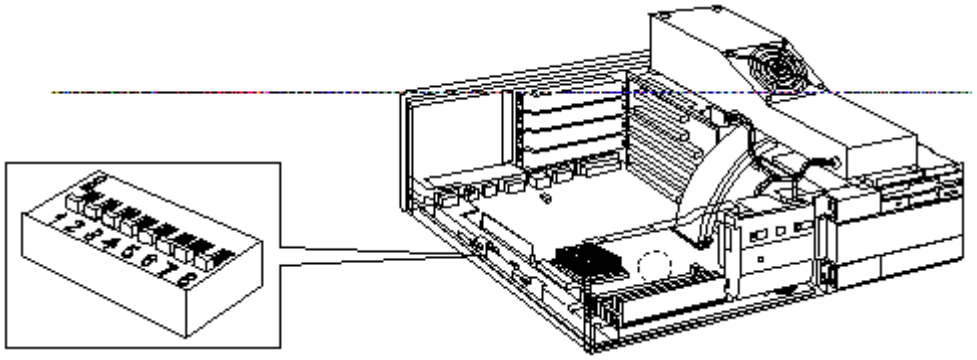
Vectra Model:	XM 5/75	XM 5/90	XM 5/120
Processor Voltage Jumper Selection:	Vcc (3.3 V)	Vr (3.38 V)	Vre (3.52 V)
Bus Speed Jumper Selection:	50 MHz	60 MHz	60 MHz
System Board part number:	D3480-69001	D3483-69001	

WARNING The XM 5/75 system board (D3480-69001) cannot be used with Pentium 90 or Pentium 120 processors.

The XM 5/90 and XM 5/120 system board (D3483-69001) cannot be used with Pentium 75 processors.

System Board Switches

The PC has one system board switch block to configure the PC.



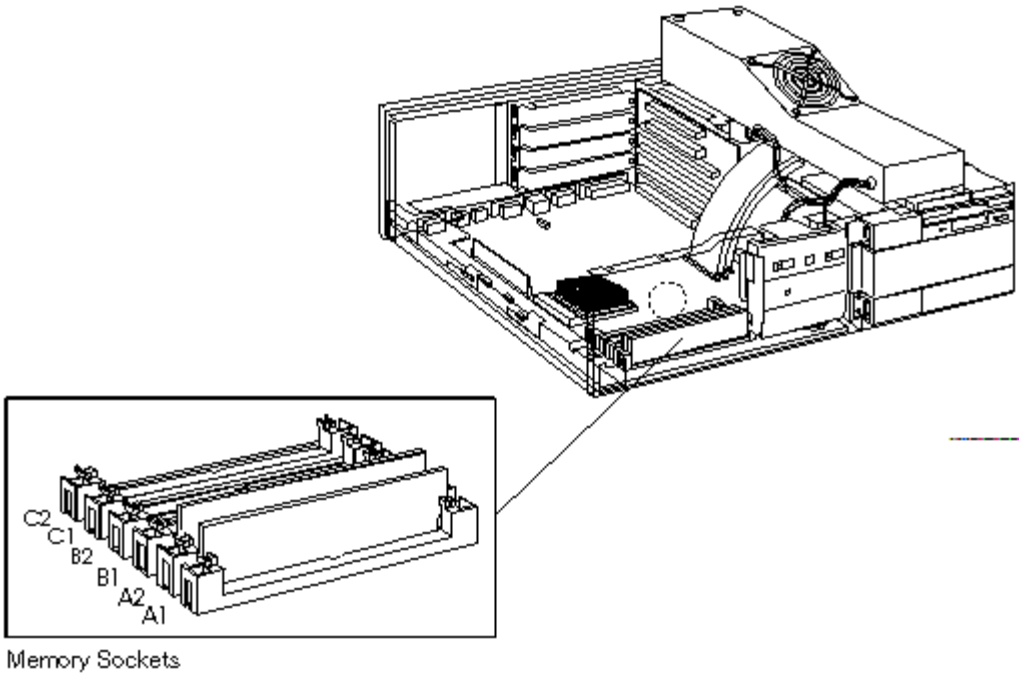
Switch:	Function:
1 - FLASH	Enable or prevent system ROM updates using the HPROMInit utility: • OFF to enable system updates — DEFAULT • ON to disable system updates.
2 - SECURE	Enable or prevent changes to the system configuration with the SETUP program: • OFF to enable changes to the configuration — DEFAULT • ON to prevent changes to the configuration.
3 - CONFG	Retain or clear the configuration stored in EEPROM: • OFF to retain configuration — DEFAULT • ON to clear configuration.
4 - PSWRD	Enable or clear (and disable) User and System Administrator Passwords stored in EEPROM: • OFF to enable passwords — DEFAULT • ON to clear passwords.
5 - PARIT	Enable or disable parity for the main memory modules: • OFF to disable parity for the main memory modules — DEFAULT • ON to enable parity for the main memory modules.
6 - PROCESSOR	**CAUTION:** THE SELECTED SPEED MUST CORRESPOND WITH THE SPEED OF THE INSTALLED PROCESSOR. • OFF to select 75 MHz, 90 MHz, and 100 MHz • ON to select 120 MHz.
7 - RESERVED	Always OFF (not used)
8 - RESERVED	Always OFF (not used)

Installing Accessories

The following sections describe how to install accessoires.

Installing Main Memory

The HP Vectra XM 5/xx series 3 PC has six sockets on the system board, labeled A1, A2, B1, B2, C1, and C2 in the diagram below. Each pair of mem ory sockets forms a bank. Slots A1 and A2 form bank 1, slots B1 and B2 form bank 2, and slots C1 and C2 form bank 3. For optimum performance, the memory modules should be installed in pairs (modules of the same size) in the same bank. A maximum of 192 MB may be installed.



Memory Sockets

When additional memory modules are installed, the following rules must be applied to get the best performance:

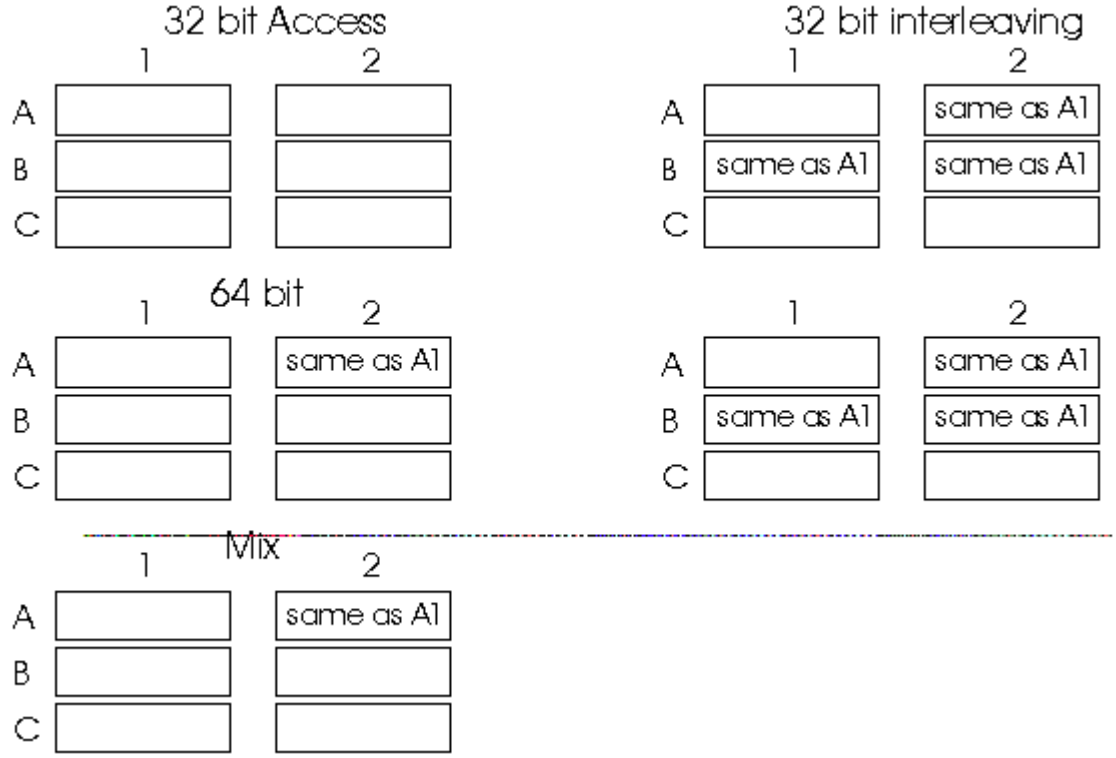
1. Install two identical-size main memory modules in the same bank to enable 64-bit wide access to this bank.
2 Install four identical-size main memory modules in bank A and B to enable memory interleaving between the two banks.

When 36-bit main memory modules are installed, it is possible to enable par ity checking by enabling the parity switch (PARIT) on the system board.

NOTE Remove factory installed 32-bit SIMMs before enabling the parity switch. All SIMMs must be 36-bits wide for parity checking.

Memory Module Configurations

The table below shows the recommended SIMM memory module configura tions.



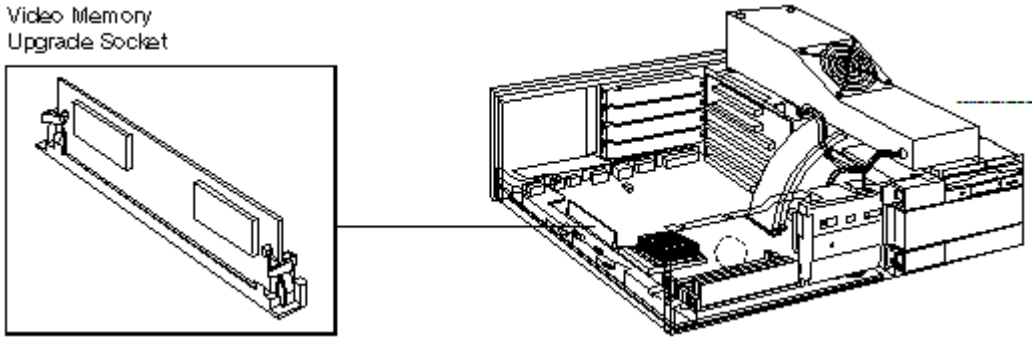
Full Sockets =	A1, B1, C1	(32 bit Access)
	A1, A2	(64 Bit Access)
	A1, A2, B1	(Mix)
	A1, A2, B1, B2	(32 bit interleaving)
	A1, A2, B1, B2, C1	(64 bit interleaving)

NOTE
- performance is better with 64-bit access than 32-bit access
- performance is better with 64-bit interleaving than with 64-bit access.

Installing Video Memory

The HP Vectra XM 5/xx series 3 PC is shipped with 1 MB of video memory which can be expanded to 2 MB for resolutions of up to 1024 5 768 in 64K colors (see resolutions supported under Video Controller in chapter 1).

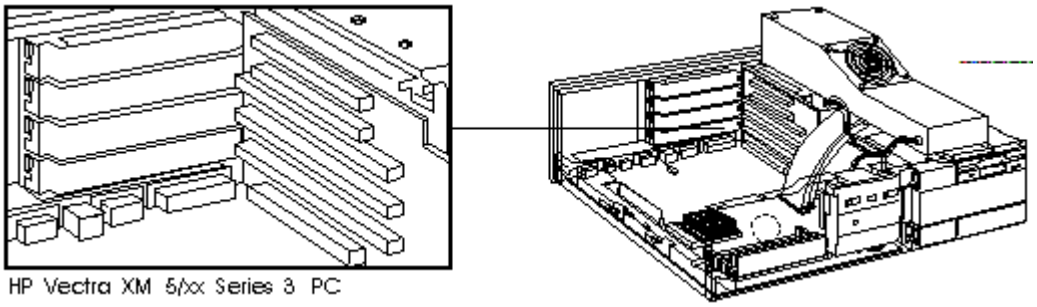
The upgrade kit (D3404A) comprises one module of 1 MB.



Installing an Accessory Board

The HP Vectra XM 5/xx series 3 PC has four slots that can be used for installing accessory boards:

- the top slot can be used for a half-length PCI accessory board
- the second slot can be used for either a full-length PCI or ISA board
- the third slot can be used for a full-length 8- or 16-bit ISA board
- the fourth (bottom) slot can be used for a half-length 8- or 16-bit ISA board.



Accessory boards may have preferred locations and special installation instructions - refer to the manual supplied with the board.

Plug and Play

The HP Vectra XM 5/xx Series 3 PC has a “PnP level 0” BIOS and meets the “Windows 95 Required” level for Plug and Play:

- PnP BIOS services
  - ◊ Give the setting of all embedded resources on the sytem board
  - ◊ PCI is automatically ‘Plug and Play’
  - ◊ PnP ISA cards handling is BIOS selectable.
- PnP Isolation
  - ◊ Recognizes and configures “Required for Boot” Plug and Play ISA adapters
  - ◊ Can devalidate BIOS selection for operating systems that have inte grated support for **ISA** Plug and Play.

Configuring Plug and Play with the SETUP program

The SETUP program can be used to select the level of support provided by the BIOS for Plug and Play-compatible accessory boards:

1. Turn on the PC and press [F2] when <Setup=F2> appears.
2 Highlight the Plug and Play Device Management line and use [F7] or F8 to select None, Boot Only, or Full.
   - ◊ If None is selected, use the ISA Configuration Utility (ICU) to con figure all accessory boards.
   - ◊ If Boot Only is selected, **ISA** Plug and Play accessory boards which have the ability to boot (start) your PC will be configured by the BIOS. Use the ICU to configure all other accessory boards.
   - ◊ If Full is selected, all **ISA** Plug and Play accessories will be configured by the BIOS. However, if you install a non-Plug and Play accessory board, use the ICU to determine a conflict-free setting for the board.
3 Press F3 to save your selection and exit from the SETUP program.

NOTE For operating systems that have integrated support for Plug and Play (such as Windows 95), None must be selected because the operating system won't expect the BIOS to configure Plug and Play devices.

Using the ISA Configuration Utility (ICU)

Use the ICU to configure Plug and Play accessory boards if Plug and Play Device Management is set to None or Boot Only in the SETUP program.

The ICU can also determine the recommended settings for each ISA non-Plug and Play board. These settings may be different from those recom mended by the accessory board's manufacturer. In this case, the board's jumper settings and driver options must be altered.

1. Double-click on the Plug and Play group icon in the Windows Program Manager.
2 Double-click on the ICU icon to launch the ISA Configuration Utility and configure system resources for the accessory board.

   The ICU is preloaded with configuration details for many non-Plug and Play accessory boards. If an accessory board is not listed by the ICU, there are two options:

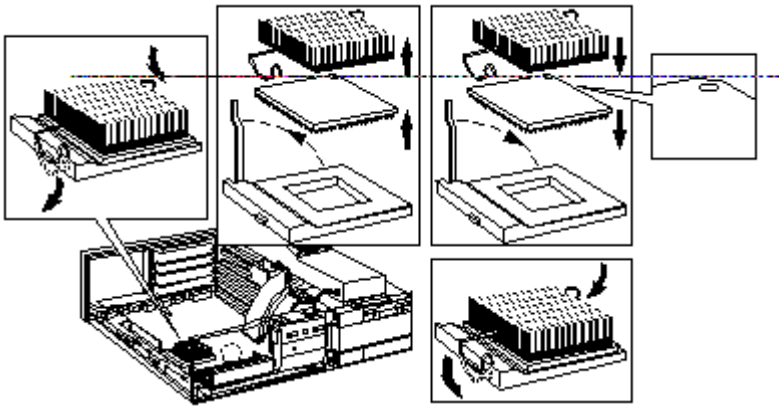
   - ◊ Some non-Plug and Play accessory boards are supplied with a configuration file, which can be used by the ICU to determine which resources are required by the board.
   - ◊ If there is not a configuration file for the accessory board, enter the configuration details manually when prompted by the ICU. Refer to the documentation supplied with the accessory board for information on the resources required by the board.

Replacing the Microprocessor

The system board has a ZIF - Zero Insertion Force - “universal” socket to allow the microprocessor to be easily changed.

Removing and Installing the Microprocessor

1. If the processor heatsink is attached to the socket, unclip the heatsink from the socket and remove the heatsink.
2 Unlock the socket and lift out the old processor.



3 To install the new processor:

- Locate the corner markers:
  - on the processor—a dot or notch (“broken” corner)
  - on the processor socket—a dot.
- Position the processor over the socket, with the processor’s corner marker facing the socket’s corner marker.
- Place the processor into the socket.
- Lower the socket’s lever to lock the processor into place.
- Replace the heatsink, if it is attached to the socket.

3 Troubleshooting and Repair

Using SETUP to Configure the PC

After reading this chapter, you will understand the main features of the SETUP program and the diagnostic utilities.

Field Name	Purpose	Options	Remarks
Date	To set date and time	YYYY/MM/DD	
Time		HH:MM:SS	
User Preferences (main options described here)	Allows you to set:		
	User Password	Set/Not set	
	Keyboard Lock Timer	Enabled/Disabled	Timer can be set to activate after 1 to 75 minutes
	Screen Blanking	Enabled/Disabled	
PC Serial Number	View the PC Serial Number		
BIOS Version	View the BIOS Version Number		
Processor	Shows the type of processor in the PC.		Automatically detected.
Computer speed	Shows the computer speed.		
Coprocessor	Shows the type of coprocessor in the PC.		
Memory Size	States the memory size of: Base, on system board Reserved Extended Total		Confirm that SETUP has detected and configured the memory size fields. Ensure that the TOTAL field is correct.
Memory Cache	Controls level-one and level-two memory cache.	On/Off	For maximum performance set to On.
Power Management: Standby	Enable or disable 'Standby' mode.	On/Off	

Sleep At	Enable or disable the 'Sleep At' power management feature.	On/Off	
Hard Disk Drives			
Drive 1 **Drive 2**	Allows you to configure the primary and secondary hard disk drives.	None or SCSI/Custom	Shows capacity of the hard disk drive if one was detected.
Interface	To define if the integrated IDE controller is used for the IDE hard disk drive.	Enabled/Disabled	Configure any controller board according to its manual.
SCSI BIOS ROM Address	View the SCSI BIOS ROM address for an HP SCSI adapter.	Enabled/None	
SCSI BIOS Shadowing	To shadow the SCSI BIOS in faster RAM for HP SCSI adapters.	Enabled/Disabled	
Flexible Disk Drives:			
Drive 1 **Drive 2**	Defines the first and second flexible disk drive.	None, 3.5-inch 1.44 MB or 5.25-inch 1.2 MB	
Bootable Drive	Define which flexible disk drive is the bootable drive.	Drive 1/Drive 2	
Interface	To define if the flexible disk drive controller is integrated.	Integrated/Controller Board	Configure any controller board according to its manual.
Security Features:			
System Administrator Password			
Start with Keyboard Locked	Keyboard locked until Password is entered.	Set/Not Set	Enable when the PC is used as a network server.
Start from Flexible Disk		Enabled/Disabled	

Start from Hard Disk		Enabled/Disabled	
Flexible Disk Drives		Enabled/Disabled	
Hard Disk Drives		Enabled/Disabled	
Writing on Flexible Disks		Enabled/Disabled	
Plug and Play Device Management	Select the level of support for Plug and Play Accessories (see section in Chapter 2)	None/Boot Only/Full	
Parallel Port		Select as combination of I/O address and IRQ channel.	Disable the parallel port to resolve an address conflict, prevent access to your system, or free an IRQ or I/O resource.
Parallel Port Mode		Centronics, ECP, EPP 1.7 or EPP 1.9	
Serial Port A **Serial Port B**		Select a combination of I/O address and IRQ channel.	Disable a serial port to resolve an address conflict, prevent access to your system, or free an IRQ or I/O resource.
Remote Start	Enable or Disable the remote start feature	None/Ethernet	
Network Protocol	Select which protocol will be used for Remote Start	None/Novell/Microsoft	
PCL Integrated Ethernet Interface	Enable or disable the integrated Ethernet interface	Enabled/Disabled	
MAC Address	View the MAC address (if the Ethernet interface is enabled)		

Video Primary Adapter	Select which video adapter mode is used by the integrated video controller	EGA/VGA or similar, Monochrome, CGA/Multimode 80, CGA/Multimode 40
Video BIOS Shadowing	Enables or disables the copying of the video BIOS on ISA video boards into RAM.	Enabled/Disabled
VGA Enhanced/ Ergonomic Modes	Select ergonomic refresh rates	Different refresh rates may be selected for different screen resolutions.
IRQ Map for Accessory Boards:		
IRQ 9	View available IRQ channels and select which IRQs are used by instaled accessory boards	Available for PCL. Used by an ISA board.
IRQ 10		
IRQ 11		
IRQ 15		

Power-on System Hardware Tests

When the PC is switched on or reset, a power-on hardware test is performed. IF an error code appears, press enter to view a short explanation of the meaning of the error.

0130, 0241, 0280

What you should do:

1. Ensure the configuration stored in CMOS has not been cleared by the system board jumper (refer to chapter 5).
2. Run SETUP to correct the configuration information
3. Replace the battery if the configuration is repeatedly lost.
4. If all of the above fail to correct the problem, the system board may need to be replaced. Contact your service representative.

0250

What you should do:

1. Run SETUP and correct the errors highlighted by the SETUP program.
2. Ensure the configuration stored in CMOS has not been cleared by the system board jumper. Make a written note of the configuration.
3. If the hardware was changed, run SETUP to update the configuration information.

06xx

What you should do:

1. Ensure that nothing is pushing down on the keyboard and that no key is stuck down.
2. If the problem persists, contact your service representative.

61xx, 6500, 6510, 6520, 8x06

What you should do:

1. Ensure the memory modules are installed correctly (refer to chapter 3).
2. If this does not fix the problem, initialize the system ROM(refer to "If You Can't Start the SETUP Program" in this chapter)
3. If the problem persists, the system board may need to be replaced. Contact your service representative.

65xx, 66xx

What you should do:

1. Disable all shadowing in SETUP
2. If this fails to correct the problem, they system board may need to be replaced. Contact your service representative.

8xxx

What you should do:

1. Check that the hard disk drive has not been disabled in SETUP.
2. Check that the disk power and data cables are correctly connected (refer to chapter 3).
3. If the hard disk has not been detected, use the custom parameters in SETUP.

910B

Explanation:

1. You connected the flexible disk drive connector B to the disk drive, and there is not connection to a drive A.
2. Change the flexible disk drive connector to A (refer to chapter 3).

Updating the System ROM

The System ROM is updated by running the HPInit utility (supplied with HP Vectra XM 5/xx series 3 PC BIOS upgrades).

NOTE Please specify the model number of the HP Vectra XM 5/xx series 3 PC when ordering the HPInit utility and the latest system BIOS. The HPInit utility supplied for the HP Vectra XM 5/xx series 3 PC cannot be used with any other HP Vectra. Do not use an HPInit utility supplied for a different HP Vectra model.

To update the system BIOS:

1. Insert the HPInit utility diskette in drive A.
2. Switch the computer OFF and then ON, and follow the instructions until the procedure finishes. Do NOT switch off the computer until the system BIOS update procedure has been completed (successfully or not) since irrecoverable damage to the ROM may occur.
3. Remove the HPInit utility diskette.
4. Switch the computer OFF and then ON to initialize the system ROM.

HP Vectra Diagnostic Utility

The HP Vectra Diagnostic Utility is common to the HP Vectra product line. It is available from the HP Bulletin Board System.

To use the Diagnostic Utility:

1. Insert a 1.44 MB 3.5-inch diskette in drive A and type:
   `Format A: /S`
   Press the Enter key
2. When the formatting has completed, type:
   `DEL A:\COMMAND.COM`
   Press the Enter key
3. Leave the diskette in drive A.
4. Download the ZIP file of the Diagnostic Utility to a directory on your hard disk.
5. Uncompress the ZIP file.
6. Copy all the files, except the ZIP file, to the diskette in drive A.
7. Print out the README.WRI file provided with the Diagnostic Utility files.
8. Follow the README.WRI file instructions to use the Diagnostic Utility.

New revisions of the Diagnostic Utility are available on the HP BBS.

NOTE The Diagnostic Utility is also available as a diskette for version B.01.01 (in SMO order 5063-7030).

HP Vectra Integrated Ethernet Diagnostic Utility

The HP Vectra Integrated Ethernet Diagnostic Utility (HPIEDIAG.EXE) includes diagnostics for testing the integrated LAN interface.

If the PC is supplied with a LAN disk, the HPIEDIAG utility is located in the \DIAG directory. If the PC has preinstalled software on the hard disk, the HPIEDIAG utility is located in the \LANDRV\DIAG directory on the hard disk.

NOTE Do not run the HPIEDIAG utility while the LAN drivers are loaded in memory. Do not run HPIEDIAG if the PC's power-on self test detected a problem with the integrated Ethernet interface.

To use the Integrated Ethernet Diagnostic Utility:

1. Insert the diskette containing the HPIEDIAG utility in drive A.
2. Make drive A the current drive, type
   `A:`
   Press the Enter key
3. Change to the DIAG directory, type
   `CD \DIAG`
   Press the Enter key
4. Start the HPIEDIAG utility, type
   `HPIEDIAG`
   Press the Enter key.

The integrated Ethernet diagnostic utility detects the presence of the integrated Ethernet interface and displays the settings of the interface (for example, the MAC address).

Interface Test

Use this option to do a quick test of the interface's hardware and configuration. During this test, no packets are sent or received over the network, so the network cable must be attached to the interface.

Link Test

This option tests the interface's ability to send and receive packets over the network. For this test, the network cable must be attached to the interface.

The test sends IEEE 802.2 test packets out on the network. Another node on the network must act as the responder. Any HP Hub Plus, HP SNMP-managed bridge, or HP router will respond correctly. The HPIEDIAG utility automatically finds a responder on the network.

New revisions of the Diagnostic Utility are made available on the HP BBS.

Appendix A Final Quiz

Final Quiz

This appendix contains the Final Quiz for the HP Vectra XM 5/xx series 3 PC Familiarization Guide.

1. Which of the following video controllers is supplied/installed?
   a Integrated Super VGA controller
   b Ultra VGA accessory board in ISA slot
   c Super VGA accessory board in PCI slot

2 How much video memory comes as standard with the HP Vectra XM 5/xx series 3 PC?
   a 512 KB
   b 1 MB
   c 2 MB

3 What is the maximum amount of video memory supported by the HP Vectra XM 5/xx series 3 PC?
   a 1 MB
   b 2 MB
   c 4 MB

4 What is the maximum amount of main memory that can be installed on the system board of the HP Vectra XM 5/xx series 3 PC?
   a 64 MB
   b 128 MB
   c 96 MB
   d 192 MB

5 What type of hard disk is supplied?
   a IDE drive
   b Fast IDE drive
   c Fast SCSI drive
   d SCSI-2 drive

6 What type of front-accessible drive(s) can be installed together?
   a one 3.5-inch flexible disk drive, one HP CD-ROM, and one half-height 5.25-inch 1.2 MB flexible disk drive
   b one 3.5-inch flexible disk drive, one HP CD-ROM, and one half-height 5.25-inch SCSI tape backup unit
   c two 3.5-inch flexible disk drives and one HP CD-ROM

7 How many accessory board slots are empty?
   a None
   b Three
   c Four
   d Eight

8 How many and what type of communication ports are standard?
   a Two serial ports, one bi-directional parallel port, and one LAN connector
   b One serial port, one bi-directional parallel port, and one LAN connector
   c Two serial ports and one bi-directional parallel port
   d Two serial ports and two bi-directional parallel ports

9 How should a PCI accessory board be configured?
   a with the SETUP program
   b by running the ISA Configuration Utility

c no configuration necessary

10 How should an ISA Plug and Play bootable accessory board be configured with Windows 95?
a change the setting with the SETUP program
b no configuration necessary
c run the ISA Configuration utility

Student Name: _____

Company Name: _____

Company Address: _____

_____

_____

_____

Appendix B HP Vectra XM 5/xx series 3 PC Course Evaluation Form

Course Evaluation Form

When done, print the form, fill it out, and mail to:TPEC,
Hewlett-Packard France
Boulevard Steve Biko
38090 VILLEFONTAINE
France

Date _____

Student Name: _____

Company Name: _____

Company Address: _____

_____

_____

_____

General

	YES	NO
Did you feel the course objectives were met?		
Did you find the course easy to understand?		
Do you feel you need additional training?		
Did you meet all the course prerequisites?		

Rate the following: 1 = poor to 5 = excellent

	1	2	3	4	5
Quality of tests and exercises					
Quality of information provided					
Quantity of information provided					
Support documents provided					
Quality of labs					
Overall rating of this course					

Level of this course

Not enough	Just right	Too technical

Comments

_____